

*BG Fuel Systems
Adjustable Fuel Log with
Poppet & Pill Bypass #170020*



INSTALLATION AND TUNING INSTRUCTIONS



The BG Adjustable Fuel Log with poppet & pill style bypass is designed to be used with belt-drive or hex-drive fuel pumps on gasoline or methanol carbureted applications to give variable fuel pressure. It is designed to fit all Road, Speed, Mighty, Race and King Demon series carburetors, and Holley 4150, 4160 carburetors (with or without bowl extensions) and Holley 4500 Series carburetors. The center-to-center distance on the outlet fittings to the carburetors adjusts from 8-1/2" to 11-1/2". Before installing your BG Adjustable fuel log, **PLEASE READ THESE INSTRUCTIONS THOROUGHLY.**

If you have any questions please contact our technical department at (706) 864-8544

INCLUDED IN THIS BOX

In this box you will find:

- 1- BG Adjustable length Fuel Log with Poppet & Pill style bypass
- 1- Bypass spring (additional to the one installed in the bypass)
- 2- Bypass pills (additional to the one installed in the bypass)
- 1 - Instruction Manual

INSTALLATION

To mount this log to your carburetor, you will need to install:

- 8 AN dual feed bowl female swivel inlet fittings.

BG Fuel Systems Part # 140023 fits Holley carburetors with 7/8" - 20 tpi inlets (sold individually)

BG Fuel Systems Part # 140024 fits Demon & Claw carburetors with 9/16" - 24 tpi inlets (sold individually)

DO NOT USE FLEXIBLE FUEL LINES BETWEEN THE LOG AND CARBURETOR.

Install the inlet fittings into the fuel bowls, making sure they are secure. Now adjust the length of the fuel log to fit the carburetor by sliding the two halves closer together or further apart until the male ends on the log line up with the female fittings on the carburetor. Tighten the fittings from the log to the carburetor (tighten equally side-to-side to keep the log from binding)

NOTE: NEVER CARRY A CARBURETOR BY THE FUEL LOG !!!

Make sure the log does not make contact with the intake manifold, valve covers, air pan scoop, carburetor linkage, or any other parts before proceeding. **Note:** Make sure your carburetor goes from closed butterfly position to wide-open throttle, and back to closed idle position without binding or contacting the fuel log before proceeding.

Install the fuel supply and return lines. This log is supplied with a -8 AN inlet fitting. You can purchase a -10 AN fitting if needed (BG Fuel Systems Part # 176031). Install the inlet hose from the fuel pump to this fitting. The poppet & pill bypass is -8 AN and should be plumbed back to the top of the fuel cell.

NOTE: NEVER BLOCK OFF THE VENT ON YOUR FUEL CELL! PROPER OPERATION OF YOUR FUEL SYSTEM DEPENDS ON THIS.

The log has (2) 1/8" NPT ports on the opposite end from the bypass that allows a fuel pressure gauge to be installed to read carburetor fuel

pressure and aid in tuning. NOTE: Avoid using liquid filled fuel pressure gauges. They can be affected by engine heat giving false fuel pressure readings. We recommend using a special dampened non-liquid filled gauge like BG Fuel Systems Part # 170124. There is also a 3/8" NPT plug in the end of the log that allows installation of fitting to an external gauge that the driver can see while racing.

FUEL PRESSURE ADJUSTMENT

Idle Fuel Pressure:

The spring tension on the poppet in the bypass controls the idle fuel pressure. To set this, start the engine and check the idle pressure. To change the pressure you would loosen the lock nut on the bypass and turn the bypass to control the pressure. Turning the bypass clockwise will increase the pressure while turning it counter clockwise will lower idle fuel pressure. Depending on your requirements, you may require a heavier or lighter spring to accommodate the pressure you need. This log comes with two different springs to accomplish this.

NOTE: Most alcohol carburetors like to idle between 2- to 4-psi, while most gasoline carburetors like to idle between 5 to 7psi. (Verify the carburetor's recommended pressure from its manufacturer)

Wide Open Throttle Fuel Pressure:

The pill in the end of your poppet bypass controls the wide-open throttle (W.O.T.) pressure. To set this you will need to rev the engine up to check your fuel pressure. Now with the engine off and return line disconnected, change the pill size being used to control the fuel pressure. To increase the W.O.T. pressure, install a SMALLER pill; conversely to decrease the W.O.T. pressure, install a larger pill. Most alcohol carburetors require 9 to 11 psi at W.O.T., while most gas carburetors require 6 to 8 psi at W.O.T. (verify the carburetor's recommended pressure from its manufacturer).

NOTE: AS WITH ANY OTHER FUEL SYSTEM COMPONENTS, INSPECT ALL FITTINGS AND CONNECTIONS PRIOR TO USE TO MAKE SURE THEY ARE TIGHT AND ARE NOT LEAKING. YOUR SAFETY DEPENDS ON IT!!!

NOTE: MAKE SURE YOUR CARBURETOR GOES FROM CLOSED BUTTERFLY POSITION TO WIDE-OPEN THROTTLE, AND BACK TO CLOSED IDLE POSITION WITHOUT BINDING OR CONTACTING THE FUEL LOG BEFORE PROCEEDING.

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WARRANTY

All Barry Grant, Inc. Products are covered by a limited warranty for 90 days from the date of purchase. Proof of purchase must be included with all returns and must include date of purchase. In the event of a defect in workmanship or material of the product, Barry Grant, Inc. will repair or replace the product, or any defective parts or parts thereof, at the election of Barry Grant, Inc. without charge to the consumer for such repair or replacement. The Limited Warranty shall not apply to labor charges, material or other incidentals in connection with removal and/or replacement of such defective product on the Consumer's vehicle.

This Limited Warranty is specifically limited to the original purchaser of the product and is enforceable only by such original purchaser.

The maximum liability of Barry Grant, Inc. in connection with this warranty shall not under any circumstances exceed the contract price of the product claimed to be defective.

This Limited Warranty shall *not apply* and shall become fully null and void, in the event of damage to the product resulting from any of the following: Unauthorized repairs; Breakage due to dropping or misapplication; Repair, alteration or modification of the product by anyone other than the manufacturer, or authorized representative thereof; Damage resulting from accidents; Abuse or misuse of the product in any manner whatsoever; Damage resulting from incorrect or improper installation. This Warranty is the only warranty applicable and is expressly in lieu of all other warranties, expressed or implied, including any implied warranty of merchantability or fitness for purpose.

Barry Grant, Inc.
1450 McDonald Road, Dahlonega, Georgia 30533

Remember, when sending in parts for service, please include a description of the problem, a return address, and a day time phone number.

For further questions, please contact our technical department at (706) 864-8544.